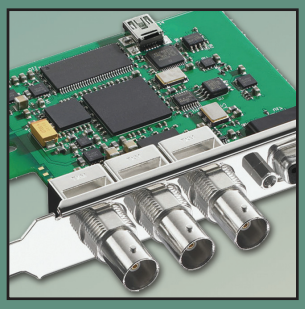
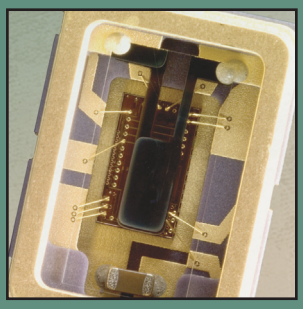
CLOCK AND OSCILLATOR PRODUCT SELECTOR GUIDE

www.silabs.com

Frequency Flexibility

Engineered to support the widest frequency range for maximum design flexibility. Available in industry standard RoHS compliant packages.

Ultra-Low Jitter

Based on our patented DSPLL® and MultiSynth technologies, these low jitter products improve system performance, reduce BOM cost, minimize board space and simplify system design.

Shortest Lead Times

Silicon Labs changes the XO/VCXO manufacturing model, enabling short, predictable lead times for any frequency oscillator.

FALL 2010

SILICON LABS

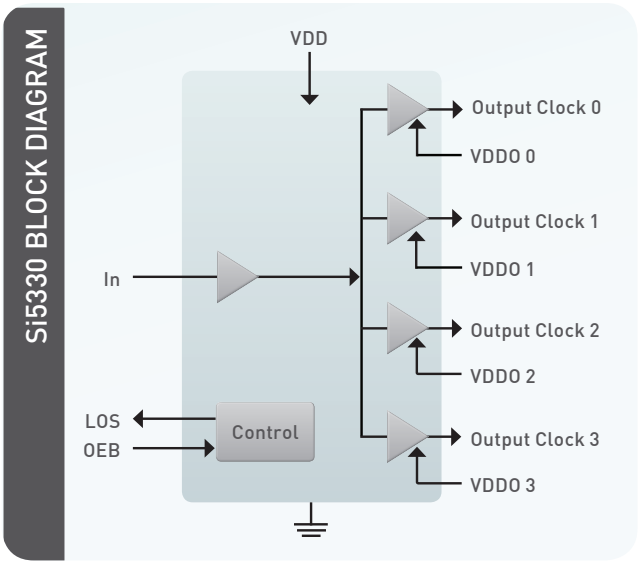
Clock Distribution

REQUEST SAMPLES AND DOWNLOAD DOCUMENTATION AT: www.silabs.com/clocks

DESCRIPTION :: Silicon Labs offers a wide range of low jitter, non-PLL based clock buffers. Ideal for clock distribution and low jitter clock fanout, these products support a broad range of signal formats, including LVPECL, LVDS, HCSL, CMOS, HSTL and SSTL. The Si5330 supports level translation in addition to clock buffering, eliminating the need for external level translators.

FEATURES::

- 1:4 LVPECL, LVDS, HCSL buffers
- 1:8 CMOS, HSTL, SSTL buffers
- Low jitter: 150 fs typ (12 kHz - 20 MHz)
- Integrated level translation (e.g. differential to single-ended or single-ended to differential)
- Best-in-class PSRR



PART NUMBER	DESCRIPTION	CONTROL	INPUT FREQUENCY (MHz)	OUTPUT FREQUENCY (MHz)	FORMAT	ADDITIVE JITTER (TYP)	PACKAGE
Si5330A	1:4 differential to LVPECL clock buffer	Pin	5-710	5-710	LVPECL	150 fs rms	4 x 4 mm 24-pin QFN
Si5330B	1:4 differential to LVDS clock buffer	Pin	5-710	5-710	LVDS	150 fs rms	4 x 4 mm 24-pin QFN
Si5330C	1:4 differential to HCSL clock buffer	Pin	5-250	5-250	HCSL	150 fs rms	4 x 4 mm 24-pin QFN
Si5330F	1:8 single-ended to CMOS clock buffer	Pin	5-200	5-200	CMOS	150 fs rms	4 x 4 mm 24-pin QFN
Si5330G	1:8 differential to CMOS clock buffer	Pin	5-200	5-200	CMOS	150 fs rms	4 x 4 mm 24-pin QFN
Si5330H	1:8 differential to SSTL clock buffer	Pin	5-350	5-350	SSTL	150 fs rms	4 x 4 mm 24-pin QFN
Si5330J	1:8 differential to HSTL clock buffer	Pin	5-350	5-350	HSTL	150 fs rms	4 x 4 mm 24-pin QFN
Si5330K	1:4 single-ended to LVPECL clock buffer	Pin	5-350	5-350	LVPECL	150 fs rms	4 x 4 mm 24-pin QFN
Si5330L	1:4 single-ended to LVDS clock buffer	Pin	5-350	5-350	LVDS	150 fs rms	4 x 4 mm 24-pin QFN
Si5330M	1:4 single-ended to HCSL clock buffer	Pin	5-250	5-250	HCSL	150 fs rms	4 x 4 mm 24-pin QFN

Clock Generation

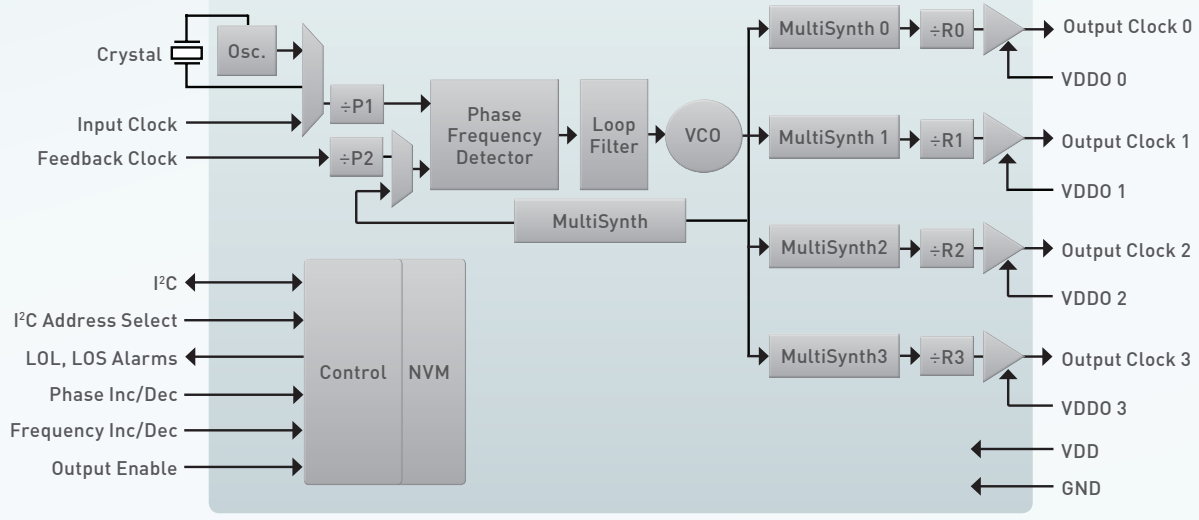
WEB-CONFIGURABLE CUSTOM PIN-CONTROLLED CLOCK GENERATORS AVAILABLE AT: www.silabs.com/ClockBuilder

DESCRIPTION :: Silicon Labs' clock generators synthesize any frequency on any output. From any crystal or reference clock input, these devices generate multiple unique, non-integer related output clocks with guaranteed 0 ppm frequency synthesis error. Based on Silicon Labs' breakthrough MultiSynth technology, each output clock can synthesize any frequency, enabling a single clock generator to replace multiple discrete clock synthesizers, XOs and VCXO with a single IC. Custom pin-controlled clock generators can be configured and ordered directly via the web, eliminating MOQ and NRE restrictions typically associated with custom clock generators. In addition, I²C programmable clock generators are available.

FEATURES::

- Any frequency, any-output clock generation
- Guaranteed 0 ppm frequency synthesis error
- Low phase jitter: <1 ps rms
- 1 to 4 inputs (crystal or clock)
- Any format, any output: LVPECL, LVDS, HCSL, CMOS, HSTL, SSTL
- High linearity VCXO which operates from a standard non-pullabe 25 or 27 MHz crystal
- 4 differential outputs or 8 single-ended outputs
- Independent VDDO per output eliminates external level translators (1.8, 2.5, 3.3 V)
- Best-in-class PSRR
- Zero delay buffer mode
- Phase, frequency margining
- Mixed free run/synchronous mode

Si5338 BLOCK DIAGRAM



PART NUMBER	DESCRIPTION	CONTROL	INPUT FREQUENCY (MHz)	OUTPUT FREQUENCY (MHz)	FORMAT	JITTER	PACKAGE
Si5355	1:4 clock generator	Pin	25/27 (Xtal) or 5-200 (Clock)	1-200 MHz	CMOS	2 ps rms	4 x 4 mm 24-pin QFN
Si5356	1:4 clock generator	Pin	25/27 (Xtal) or 5-200 (Clock)	1-200 MHz	CMOS	2 ps rms	4 x 4 mm 24-pin QFN

Clock Generation (cont.)

PART NUMBER	DESCRIPTION	CONTROL	INPUT FREQUENCY (MHz)	OUTPUT FREQUENCY (MHz)	FORMAT	JITTER	PACKAGE
Si5334A	1:4 clock generator	Pin	8-30 (Xtal) or 5-710 (Clock)	0.16-710 MHz	CMOS, LVPECL, LVDS, HCSL, SSTL, HSTL	1 ps rms	4 x 4 mm 24-pin QFN
Si5334B		Pin		0.16-350 MHz			4 x 4 mm 24-pin QFN
Si5334C		Pin		0.16-200 MHz			4 x 4 mm 24-pin QFN
Si5334D	1:4 clock generator + pin controlled phase inc/dec	Pin	8-30 (Xtal) or 5-710 (Clock)	0.16-710 MHz	CMOS, LVPECL, LVDS, HCSL, SSTL, HSTL	1 ps rms	4 x 4 mm 24-pin QFN
Si5334E		Pin		0.16-350 MHz			4 x 4 mm 24-pin QFN
Si5334F		Pin		0.16-200 MHz			4 x 4 mm 24-pin QFN
Si5334G	1:4 clock generator + pin controlled frequency inc/dec	Pin	8-30 (Xtal) or 5-710 (Clock)	0.16-710 MHz	CMOS, LVPECL, LVDS, HCSL, SSTL, HSTL	1 ps rms	4 x 4 mm 24-pin QFN
Si5334H		Pin		0.16-350 MHz			4 x 4 mm 24-pin QFN
Si5334J		Pin		0.16-200 MHz			4 x 4 mm 24-pin QFN
Si5334K	1:4 clock generator + pin controlled spread spectrum	Pin	8-30 (Xtal) or 5-710 (Clock)	0.16-710 MHz	CMOS, LVPECL, LVDS, HCSL, SSTL, HSTL	1 ps rms	4 x 4 mm 24-pin QFN
Si5334L		Pin		0.16-350 MHz			4 x 4 mm 24-pin QFN
Si5334M		Pin		0.16-200 MHz			4 x 4 mm 24-pin QFN
Si5338A	1:4 clock generator	I²C	8-30 (Xtal) or 5-710 (Clock)	0.16-710 MHz	CMOS, LVPECL, LVDS, HCSL, SSTL, HSTL	1 ps rms	4 x 4 mm 24-pin QFN
Si5338B		I²C		0.16-350 MHz			4 x 4 mm 24-pin QFN
Si5338C		I²C		0.16-200 MHz			4 x 4 mm 24-pin QFN
Si5338D	1:4 clock generator + pin controlled phase inc/dec	I²C	8-30 (Xtal) or 5-710 (Clock)	0.16-710 MHz	CMOS, LVPECL, LVDS, HCSL, SSTL, HSTL	1 ps rms	4 x 4 mm 24-pin QFN
Si5338E		I²C		0.16-350 MHz			4 x 4 mm 24-pin QFN
Si5338F		I²C		0.16-200 MHz			4 x 4 mm 24-pin QFN
Si5338G	1:4 clock generator + pin controlled frequency inc/dec	I²C	8-30 (Xtal) or 5-710 (Clock)	0.16-710 MHz	CMOS, LVPECL, LVDS, HCSL, SSTL, HSTL	1 ps rms	4 x 4 mm 24-pin QFN
Si5338H		I²C		0.16-350 MHz			4 x 4 mm 24-pin QFN
Si5338J		I²C		0.16-200 MHz			4 x 4 mm 24-pin QFN
Si5338K	1:4 clock generator + pin controlled output enable	I²C	8-30 (Xtal) or 5-710 (Clock)	0.16-710 MHz	CMOS, LVPECL, LVDS, HCSL, SSTL, HSTL	1 ps rms	4 x 4 mm 24-pin QFN
Si5338L		I²C		0.16-350 MHz			4 x 4 mm 24-pin QFN
Si5338M		I²C		0.16-200 MHz			4 x 4 mm 24-pin QFN
Si5338N	4:4 clock generator	I²C	8-30 (Xtal) or 5-710 (Clock)	0.16-710 MHz	CMOS, LVPECL, LVDS, HCSL, SSTL, HSTL	1 ps rms	4 x 4 mm 24-pin QFN
Si5338P		I²C		0.16-350 MHz			4 x 4 mm 24-pin QFN
Si5338Q		I²C		0.16-200 MHz			4 x 4 mm 24-pin QFN
Si5350A	1:8 clock generator	Pin	25/27 (Xtal)	8 KHz-125 MHz	CMOS	100 ps pp	4 x 4 mm 20-pin QFN/ 6 x 8 mm 24-pin QSOP
Si5350A	1:3 clock generator	Pin	25/27 (Xtal)	8 KHz-125 MHz	CMOS	100 ps pp	3 x 5 mm 10-pin MSOP
Si5350B	1:8 clock generator + VCXO	Pin	25/27 (Xtal)	8 KHz-125 MHz	CMOS	100 ps pp	4 x 4 mm 20-pin QFN/ 6 x 8 mm 24-pin QSOP
Si5350B	1:3 clock generator + VCXO	Pin	25/27 (Xtal)	8 KHz-125 MHz	CMOS	100 ps pp	3 x 5 mm 10-pin MSOP
Si5350C	1:8 clock generator + PLL	Pin	25/27 (Xtal)	8 KHz-125 MHz	CMOS	100 ps pp	4 x 4 mm 20-pin QFN/ 6 x 8 mm 24-pin QSOP
Si5350C	1:3 clock generator + PLL	Pin	25/27 (Xtal)	8 KHz-125 MHz	CMOS	100 ps pp	3 x 5 mm 10-pin MSOP
Si5351A	1:8 clock generator	I²C	25/27 (Xtal)	8 KHz-125 MHz	CMOS	100 ps pp	4 x 4 mm 20-pin QFN/ 6 x 8 mm 24-pin QSOP
Si5351A	1:8 clock generator	I²C	25/27 (Xtal)	8 KHz-125 MHz	CMOS	100 ps pp	3 x 5 mm 10-pin MSOP
Si5351B	1:8 clock generator + VCXO	I²C	25/27 (Xtal)	8 KHz-125 MHz	CMOS	100 ps pp	4 x 4 mm 20-pin QFN/ 6 x 8 mm 24-pin QSOP
Si5351B	1:3 clock generator + VCXO	I²C	25/27 (Xtal)	8 KHz-125 MHz	CMOS	100 ps pp	3 x 5 mm 10-pin MSOP
Si5351C	1:8 clock generator + PLL	I²C	25/27 (Xtal)	8 KHz-125 MHz	CMOS	100 ps pp	4 x 4 mm 20-pin QFN/ 6 x 8 mm 24-pin QSOP
Si5351C	1:3 clock generator + PLL	I²C	25/27 (Xtal)	8 KHz-125 MHz	CMOS	100 ps pp	3 x 5 mm 10-pin MSOP

PART NUMBER	CONTROL	CLOCK INPUTS/ OUTPUTS	INPUT FREQUENCY (MHz)	OUTPUT FREQUENCY (MHz)	JITTER (12 KHz TO 20 MHz)	PLL BANDWIDTH	HITLESS SWITCHING	DIGITAL HOLD	FREERUN	VCO FREEZE	SIGNAL FORMAT	PACKAGE
Si5319	I²C or Pin	1/1	0.002 to 710	0.002 to 1417	300 fs rms typ	60 Hz to 8.4 kHz			•	•	CMOS, LVDS, LVPECL, CML	36-Pin QFN
Si5324	I²C or Pin	2/2	0.002 to 710	0.002 to 1417	290 fs rms typ	4 Hz to 525 Hz	•	•	•			36-Pin QFN
Si5326	I²C or Pin	2/2	0.002 to 710	0.002 to 1417	300 fs rms typ	30 kHz to 1.3 MHz	•	•	•			36-Pin QFN
Si5368	I²C or Pin	4/5	0.002 to 710	0.002 to 1417	300 fs rms typ	60 kHz to 8.4 MHz	•	•	•			100-Pin TQFP

Jitter Attenuators/Clock Cleaners

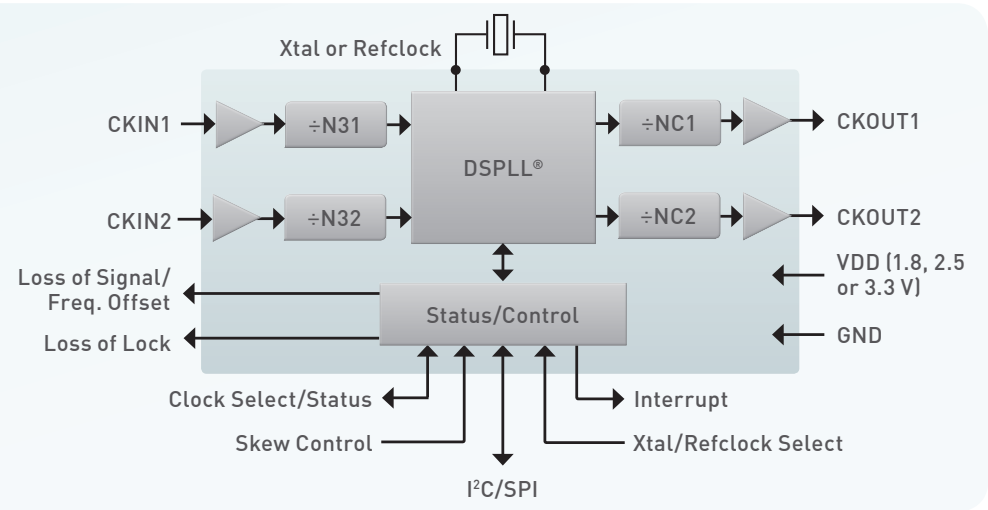
REQUEST SAMPLES AND DOWNLOAD DOCUMENTATION AT: www.silabs.com/clocks

DESCRIPTION :: Silicon Labs' Precision Clocks provide flexible frequency synthesis, jitter attenuation and clock distribution in high-performance timing applications requiring sub 1 ps jitter performance. The devices accept multiple clock inputs ranging from 2 kHz to 710 MHz and generate multiple low jitter, independent, synchronous clock outputs ranging from 2 kHz to 945 MHz and select frequencies to 1.4 GHz. The precision clocks are based on Silicon Labs' proven third-generation DSPLL® technology, which generates any output frequency from any input frequency with 300 fs rms jitter performance in a highly integrated PLL solution that eliminates the need for external VCXO and loop filter components.

FEATURES::

- Generates any output frequency from any input frequency
- Ultra-low jitter: 290 fs RMS
- Integrated loop filter with selectable loop bandwidth
- Hitless switching with phase buildout (auto/manual)
- Holdover, freerun
- Best-in-class PSRR
- I²C/SPI or pin-controlled
- User-selectable output clock signal format (LVPECL, LVDS, CML, CMOS)
- Single VDD for 1.8, 2.5 or 3.3 V ±10% operation
- In-system, flash-based programmable with small form factor MCU
- Simplified set up using DSPLLsim configuration software utility

Si5324 BLOCK DIAGRAM



PART NUMBER	CONTROL	CLOCK INPUTS/ OUTPUTS	INPUT FREQUENCY (MHz)	OUTPUT FREQUENCY (MHz)	JITTER (12 KHz TO 20 MHz)	PLL BANDWIDTH	HITLESS SWITCHING	DIGITAL HOLD	FREERUN	SIGNAL FORMAT	PACKAGE
Si5315	Pin	2/2	0.008 to 644	0.008 to 644	450 fs rms typ	60 Hz to 8 kHz	•	•		CMOS, LVDS, LVPECL, CML	36-Pin QFN
Si5317	Pin	1/2	1 to 710	1 to 710	290 fs rms typ	60 Hz to 8 kHz		•			36-Pin QFN
Si5319	I²C or Pin	1/1	0.002 to 710	0.002 to 1417	300 fs rms typ	60 Hz to 8 kHz			•		36-Pin QFN
Si5323	Pin	2/2	0.008 to 707	0.008 to 1050	300 fs rms typ	60 Hz to 8 kHz	•	•			36-Pin QFN
Si5324	I²C or Pin	2/2	0.002 to 710	0.002 to 1417	290 fs rms typ	4 Hz to 525 Hz	•	•	•		36-Pin QFN
Si5326	I²C or Pin	2/2	0.002 to 710	0.002 to 1417	300 fs rms typ	60 Hz to 8 kHz	•	•	•		36-Pin QFN
Si5366	Pin	4/5	0.008 to 700	0.008 to 1050	300 fs rms typ	60 Hz to 8 kHz	•	•			100-Pin TQFP
Si5368	I²C or Pin	4/5	0.002 to 710	0.002 to 1417	300 fs rms typ	60 Hz to 8 kHz	•	•	•		100-Pin TQFP

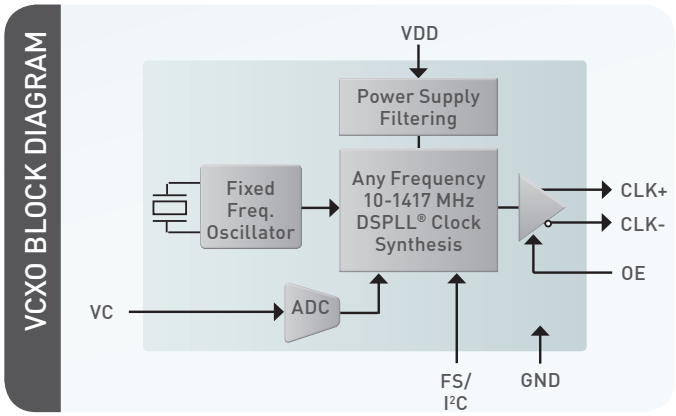
XOs/VCXOs

REQUEST CUSTOM PART NUMBERS AND SAMPLES AT: www.silabs.com/VCXOpartnumber

DESCRIPTION :: Silicon Labs' oscillators and voltage controlled crystal oscillators (XO/VCXOs) leverage advanced DSPLL® circuitry to provide a low jitter clock at any frequency from 10 MHz to 1.4 GHz. Unlike a traditional XO, where a different crystal is required for each output frequency, Silicon Labs' XO/VCXOs use one fixed frequency crystal to provide a wide range of output frequencies. This IC-based approach allows the crystal resonator to provide exceptional frequency stability and reliability, while providing best-in-class jitter performance and supply noise rejection, simplifying the task of generating low jitter clocks in noisy environments. All devices are factory configurable for a wide variety of user specifications including frequency, supply voltage, output format, and stability, thereby eliminating long lead times associated with custom oscillators.

FEATURES::

- Wide frequency range: 10 MHz to 1.4 GHz
- Samples of any XO/VCXO available within 2 weeks
- Superior jitter performance: <0.3 ps rms
- Excellent frequency stability with superior initial accuracy
- Single, dual, quadand I²C programmable configurations
- LVPECL, LVDS, CML and CMOS options
- 1.8, 2.5, or 3.3 V options
- Industry standard, ROHS-compliant 5 x 7 mm package and pinout



Fixed Frequency XO/VCXOs

PART NUMBER	TYPE	FREQUENCY	CONTROL	FREQUENCY RANGE	JITTER	STABILITY/APR OPTIONS (PPM)	Kv OPTIONS (PPM/V)	PACKAGE
Si530/1	XO	Single	Pin	10 to 945 MHz 970 to 1134 MHz 1213 to 1417 MHz	0.3 ps rms	±20, ±31.5, ±61.5	N/A	5 x 7 mm 6-pad
Si532/3	XO	Dual	Pin		0.3 ps rms		N/A	5 x 7 mm 6-pad
Si534	XO	Quad	Pin		0.3 ps rms		N/A	5 x 7 mm 8-pad
Si550	VCXO	Single	Pin	10 to 945 MHz 970 to 1134 MHz 1213 to 1417 MHz	0.5 ps rms	±12 to ±375	33 to 356	5 x 7 mm 6-pad
Si552	VCXO	Dual	Pin		0.5 ps rms			5 x 7 mm 6-pad
Si554	VCXO	Quad	Pin		0.5 ps rms			5 x 7 mm 8-pad
Si590/1	XO	Single	Pin	10 to 525 MHz	0.5 ps rms	±30, ±50, ±100	N/A	5 x 7 mm 6-pad
Si595	VCXO	Single	Pin		0,7 ps rms	±10 to ±370	45 to 380	5 x 7 mm 6-pad

I²C Programmable XO/VCXOs

PART NUMBER	TYPE	FREQUENCY RANGE	TUNING RESOLUTION	JITTER	TOTAL STABILITY (PPM)	TOTAL APR (PPM)	OUTPUT FORMAT	SUPPLY VOLTAGE (V)	TEMP RANGE (C)	PACKAGE
Si570	XO	10 to 280 MHz 10 to 810 MHz 10 to 1417 MHz	80 PPT	0.3 ps rms	±31.5, ±62.5	N/A	CMOS, LVPECL, LVDS, CML	1.8, 2.5, 3.3 V	-40 to 85 °C	5 x 7 mm 8-pad
Si571	VCXO			0.5 ps rms	N/A	±12 to ±375		1.8, 2.5, 3.3 V	-40 to 85 °C	5 x 7 mm 8-pad
Si598	XO	10 to 525 MHz 10 to 280 MHz 10 to 160 MHz	28 PPT	0.5 ps rms	±30, ±50, ±100	N/A		1.8, 2.5, 3.3 V	-40 to 85 °C	5 x 7 mm 8-pad
Si599	VCXO			0.7 ps rms	N/A	±10 to ±370		1.8, 2.5, 3.3 V	-40 to 85 °C	5 x 7 mm 8-pad

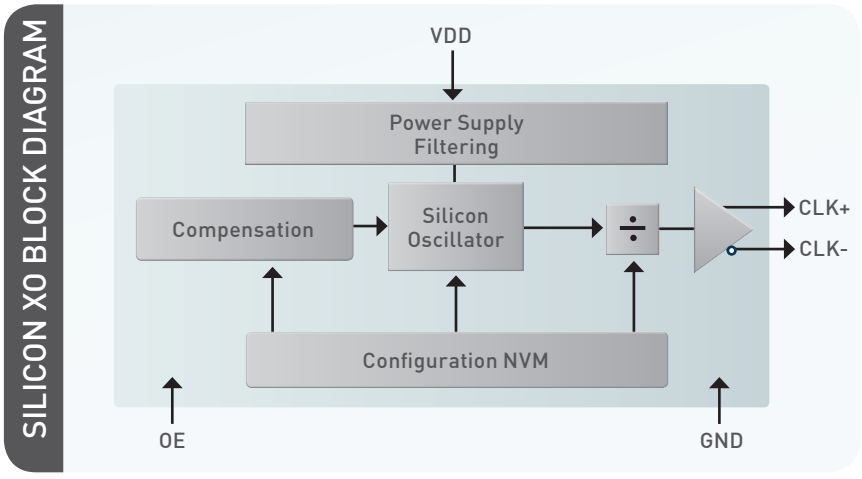
Silicon Oscillators

REQUEST CUSTOM PART NUMBERS AND SAMPLES AT: www.silabs.com/siliconXOpartnumber

DESCRIPTION :: The Si500 low cost silicon oscillator provides high reliability and excellent immunity to shock and vibration. Through the use of innovative stabilization circuitry, the need for a mechanical resonator (quartz, MEMs or SAW) is eliminated. An all-silicon solution delivers superior aging, 20 ppm temperature stability and reliable start up and operation. Given its CMOS-based architecture, the Si500 delivers significantly better Failure in Time (FIT) and Mean Time Between Failure (MTBF) than traditional crystal oscillators, minimizing the cost associated with field returns due to crystal quality issues. The Si500 leverages a standard CMOS IC manufacturing flow, eliminating the expensive packaging and mechanically intensive processing steps required by crystal oscillators. All devices are factory configurable for a variety of user specifications including frequency, supply voltage, and output format.

FEATURES::

- Quartz-free, all silicon construction
- Generates any frequency from 0.9 to 200 MHz
- Samples of any frequency available in 2 weeks
- Low jitter: 1.5 ps RMS phase jitter, 2 ps RMS period jitter
- No internal PLL
- 3.3, 2.5 and 1.8 V options
- CMOS, LVPECL, LVDS, HCSL and SSTL options
- Driver stopped, tristate, and power down options
- Footprint compatible with 3.2 mm x 5.0 mm



PART NUMBER	TYPE	FREQUENCY	TEMPERATURE STABILITY	TOTAL STABILITY (PPM)	OUTPUT FORMAT	FOOTPRINT
Si500S	XO	0.9 to 200 MHz	± 20 ppm typ	± 150 (0-70 °C) ± 250 (0-85 °C)	CMOS, SSTL	3.2 x 5 mm 4-pad
Si500D	XO	0.9 to 200 MHz	± 20 ppm typ	± 150 (0-70 °C) ± 250 (0-85 °C)	LVPECL, LVDS, HCSL, dual output CMOS, diff CMOS, dual output SSTL, diff SSTL	3.2 x 5 mm 6-pad

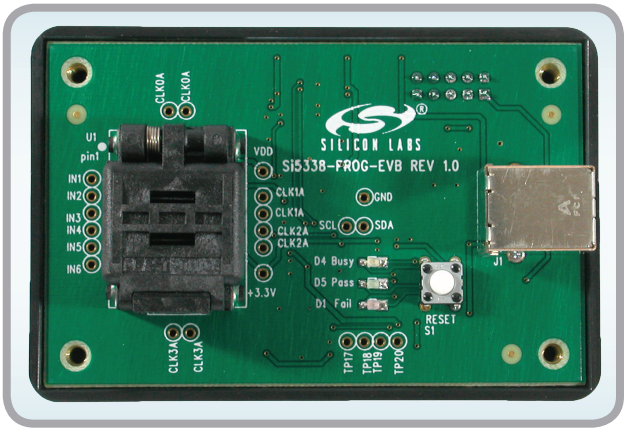
Turnkey Support

Silicon Labs offers complete tools to help designers throughout the entire development process. Both clock and oscillator solutions offer hardware and software platforms to easily set up, configure and evaluate overall device performance.

FULL DOCUMENTATION, SOFTWARE AND APPLICATION NOTES ARE AVAILABLE AT: www.silabs.com/timing

Available Clock and Oscillator Evaluation Boards and Kits

PART NUMBER	DESCRIPTION
Si5338/56-PROG-EVB	Si5338, Si5356 Field Programming Kit
Si5356-EVB	Si5355, Si5356 MultiSynth Software Controlled Evaluation Board
Si5338-EVB	Si5338, Si5334, Si5330 MultiSynth Software Controlled Evaluation Board
Si5315-EVB	Si5315 Pin-controlled Evaluation Board
Si5316-EVB	Si5316 Pin-controlled Evaluation Board
Si5317-EVB	Si5317 Pin-controlled Evaluation Board
Si5319-EVB	Si5319 DSPLLsim Software Controlled Evaluation Board
Si5322/23-EVB	Si5322, Si5323 DSPLLsim Software Controlled Evaluation Board
Si5324-EVB	Si5324 DSPLLsim Software Controlled Evaluation Board
Si5325/26-EVB	Si5325, Si5326 DSPLLsim Software Controlled Evaluation Board
Si5365/66-EVB	Si5365, Si5366 DSPLLsim Software Controlled Evaluation Board
Si5367/68-EVB	Si5367, Si5368 DSPLLsim Software Controlled Evaluation Board
Si5xx5x7-EVB	Si53x/55x/59x XO/VCXO Evaluation Board
Si57x-EVB	Si57x/59x I²C Programmable XO/VCXO
Si50x-32x4-EVB	Si500 Silicon Oscillator Evaluation Board



Si5338/Si5356 Field Programming Kit

The Si5338/Si5356 Field Programming Kit provides all of the tools necessary for writing a new default configuration file to the one-time programmable (OTP) non-volatile memory (NVM) in the Si5338/Si5356 clock generator. The EVB is fully powered from a single USB port, contains a high quality and easy-to-use socket and provides status LEDs for pass or fail indication. The kit consists of the Field Programmer (Si5338-PROG-EVB), a USB cable, and clock generator software, a simple software-based user interface .

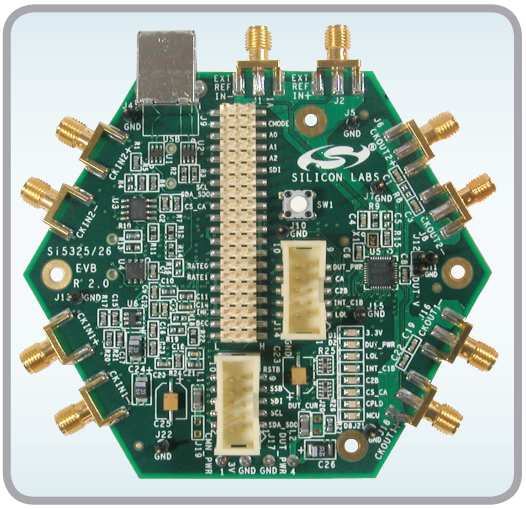
Si531x/2x Evaluation Boards

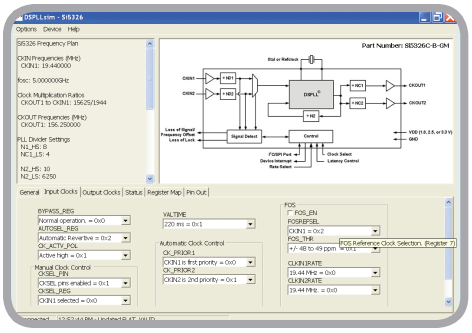
The Si531x/2x Evaluation Boards (EVBs) provide platforms for evaluating the Si5316, Si5319, Si5323, Si5324 and Si5326 clocks. Each EVB contains a C8051F340 MCU that supports USB communications with a PC host.

For the pin controlled parts, the pin settings of the devices are determined by the MCU and the provided PC resident software, jumper plugs are provided for manual control.

For the MCU controlled parts, the devices are controlled and monitored through either an SPI or I²C serial port. Ribbon headers and SMA connectors are included so that external clock in, clock out and status pins are easily accessed. On-board termination is also included to evaluate single-ended or differential as well as ac or dc coupled clock inputs and outputs.

Clocks can be run at either 1.8, 2.5 or 3.3 V, using a separate DUT (Device Under Test) power supply connector, while the USB MCU remains at 3.3 V. LEDs are provided for convenient monitoring of key status signals.



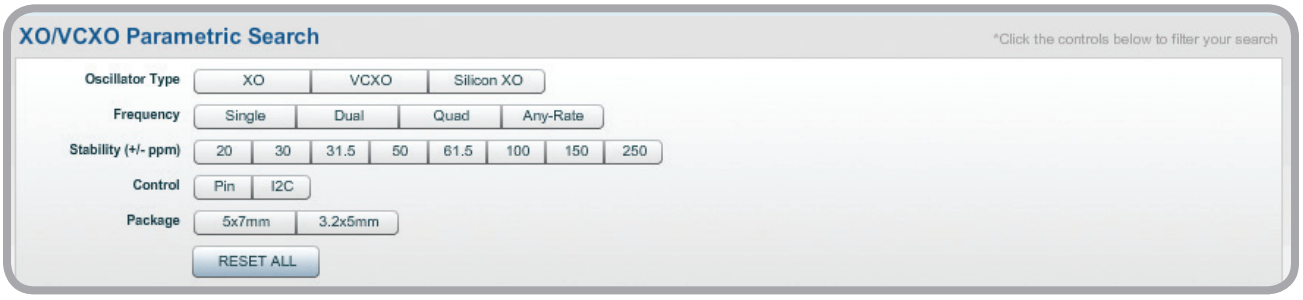


DSPLLsim Software

DSPLLsim PC-based software utility assists users with frequency planning, loop bandwidth selection and overall device configuration of Silicon Labs Jitter Attenuating Clocks. The DSPLLsim software can be used in standalone mode or can be used directly to control the Si531x/2x/6x in the device evaluation kit. The DSPLLsim software provides a listing of pin/register settings based on the user-specified configuration, significantly simplifying PLL design.

Find the Right Part!

Silicon Labs offers easy-to-use parametric searches for clock and oscillator products. Click the buttons to filter as you search for the features you require and find the perfect part to meet your needs. You can then buy or sample parts or export your results into a sortable Excel spreadsheet. **www.silabs.com/xovcxoparametricsearch**



Clock and Oscillator Design Services

QUICKLY BUY OR SAMPLE PRODUCTS ON OUR WEBSITE AT www.silabs.com/buyXO

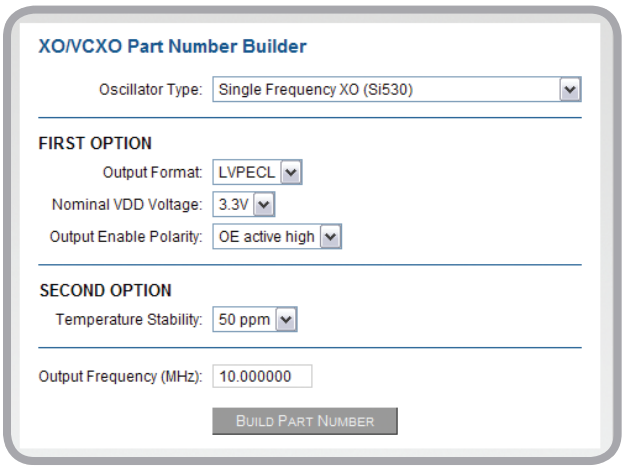
Silicon Labs offers the industry's broadest portfolio of clocks and oscillators for communications, computing, broadcast and consumer applications with the shortest lead times in the industry. Our timing IC portfolio leverages patented DSPLL, MultiSynth and silicon oscillator technologies to eliminate expensive discrete components while improving performance, minimizing board space and simplifying system design. Below are three services we offer to help make your next project easier.

Clock Tree Design Utility

Interested in simplifying your clock tree? Silicon Labs offers clock tree design and consulting services to help designers simplify design and layout. Simply fill out the web form or, for more complicated timing architectures, upload file(s) showing your existing clock tree and Silicon Labs will return a custom clock tree proposal within 3 business days based on your design.

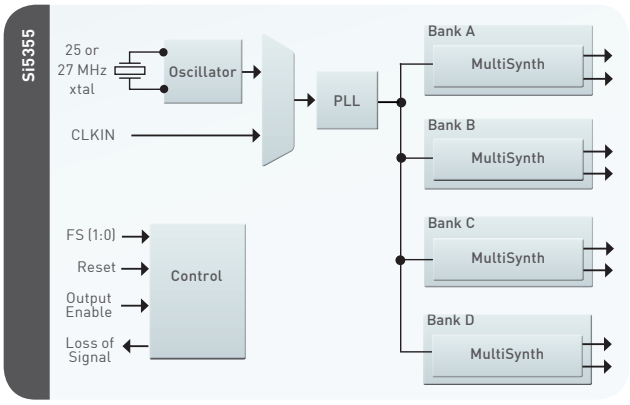
Built to Order Custom XO/VCXO Samples

Silicon Labs offers an easy-to-use web utility to build and configure the right XO/VCXO for your application in minutes. Need to reorder? Look up a currently existing product by part number or top mark code. Samples will ship in less than two weeks.



ClockBuilder™ Utility

The ClockBuilder utility allows designers to tailor the Si5355's flexible clock architecture to build custom, application-specific clocks, eliminating the need for field programming hardware and software required by programmable clocks. Select the input and output frequency requirements below to generate a custom part number.



Industry's Shortest Lead Times

Low-jitter, high-performance, custom samples are available overnight, and to help you get to market faster, production quantities ship in less than 2–4 weeks. Silicon Labs' complete portfolio of industry-leading XOs, VCXOs, clock generators, jitter attenuating clocks and clock buffers set a new standard for flexibility, performance and lead time.

2 WEEK LEAD TIMES

- Most frequency flexible timing solutions in the industry; ideal for multi-rate applications
- Available in industry-standard, drop-in compatible packages
- Based on patented DSPLL® and MultiSynth technologies, these low jitter products improve system performance, reduce BOM, minimize board space and simplify system design
- All custom devices are available without NRE fees and < 2-week lead times

Silicon Labs' products are designed and manufactured to ISO 9001, ISO 14001 and ISO/TS 16949 standards.

ISO 9001
Quality Management System
Design and Manufacture of Integrated Circuits
Certificate Registration No: 951 08 4762

ISO 14001
Environmental Management System
Design and Manufacture of Integrated Circuits
Certificate Registration No: 951 09 4998

ISO/TS 16949
Quality Management System for
Manufacture of Integrated Circuits and Related Products for Automotive Applications
Certificate Registration No.: 12 111 33114 TMS
IATF Certificate No.: 0080212

Silicon Labs audio products are CE certified; Certificate No: EN55020

Mixed Sources
Product group from well-managed forests, controlled sources and recycled wood or fiber
www.fsc.org Cert no. SW-COC-001730
© 1996 Forest Stewardship Council

XX%

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WEB, October 2010, Rev D SEL-CLK-2010D

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